

marked. In the annual period it will be seen that the months of greatest frequency are those of the equinoxes, viz, April and September, and the months of least frequency are December and January, corresponding exactly to a well-known generalization first announced by Mairan and modified by Lovering, but explained by Mr. E. B. Elliott, of Washington, in 1872 (Bull. Phil. Soc., Vol. I, p. 45), according to whom the number of auroras depends on the rate at which the earth, in its annual orbit, cuts through cosmic lines of electric force.

DISCHARGE OF STREAMS DURING FLOODS.

This Bureau has received from John E. Codman, of the Bureau of Water Supply, Philadelphia, copies of the automatic records of the rain gauges for three different localities in Pennsylvania, about 35 miles apart, viz: (1) corner of Thirty-second and Spruce streets, Philadelphia; (2) the Forks of the Neshaminy; (3) Frederick Post-office, Spring Mount. These show the total amount and the rate of rainfall during the ten days, May 19-28, 1894; the maximum rate during several hours was 2.04 inches per hour at station No. 1; 1.03 at station No. 2; and 2.90 at station No. 3. These stations are in the watershed of streams that flow into the Schuylkill River. The registering stream gauge in the Perkiomen showed a maximum rise of 17 feet, and a discharge for about two hours at the rate of 100 cubic feet per second for each of its 152 square miles of watershed. The Neshaminy stream gauge showed a rise of 16.3 feet and a discharge for two hours of about 100 cubic feet per second for each of its 139.3 square miles of watershed. The Yohickon gauge showed a rise of 13.2 feet, and a flow for about two hours of 100, or a little more, cubic feet per second for each of its 102.2 square miles of watershed. These are greater discharges than any that have been recorded within the past ten years or since the records began, although it is stated that these streams were two or three feet higher in 1869.

OBSERVATIONS AT HONOLULU, HAWAIIAN ISLANDS.

As the weather on the Pacific coast depends so largely upon the conditions of the atmosphere to the westward, it is considered important to publish in full and as soon as prac-

ticable the data furnished by observers in Alaska, the Hawaiian Islands, and adjacent regions.

Meteorological observations at Honolulu, Hawaiian Islands, for June, 1894, by Curtis J. Lyons, Meteorologist to the Government Survey.

Date.	Barometer at sea level.			Temperature.				Humidity.			Wind.		Cirrus cloud moving from—	Rain to 6 a. m.
	9 a. m.	3 p. m.	9 p. m.	6 a. m.	2 p. m.	9 p. m.	Minimum.	Maximum.	Relative.		Direction.	Force.		
									9 a. m.	9 p. m.				
1...	Ins.	Ins.	Ins.	0	0	0	0	0	%	%				Ins.
2...	30.18	30.10	30.17	73	79	74	73	83	63	78	6.8	ne.	4.5	0.00
3...	30.15	30.09	30.13	72	78	74	70	80	71	67	6.6	nne.	3	0.12
4...	30.12	29.07	30.13	73	79	74	70	81	59	67	6.1	ne.	4	0.15
5...	30.13	30.07	30.14	74	80	74	73	82	53	67	5.7	ene.	5.3	0.00
6...	30.11	30.07	30.15	73	79	74	72	81	64	70	6.3	ene.	3	0.00
7...	30.14	29.08	30.12	67	81	73	67	83	60	69	6.3	ne.	3	0.00
8...	30.13	30.06	30.12	73	82	73	66	82	60	74	6.6	e.	3	0.00
9...	30.12	30.05	30.14	66	80	70	65	82	67	85	6.6	n., s.	1	0.00
10...	30.10	30.06	30.13	70	80	71	66	86	70	83	6.8	s., e.	1, 3, 0	8.30 w.
11...	30.10	30.02	30.08	68	80	74	66	83	70	74	7.1	s., ne.	2	0.00
12...	30.08	30.02	30.08	74	80	75	72	82	61	64	6.6	ne.	3	0.40 w.
13...	30.10	30.06	30.14	71	78	75	73	81	63	71	6.6	ne.	3, 6	0.00
14...	30.15	30.12	30.13	74	79	74	72	80	66	66	6.2	ene.	6, 7	0.01
15...	30.19	30.12	30.10	73	76	73	73	80	70	74	6.3	ene.	5	0.01
16...	30.13	30.03	30.10	70	77	72	68	80	70	70	6.1	nne.	4	0.16
17...	30.09	30.02	30.07	72	79	73	69	81	62	66	6.0	ne.	4	0.09
18...	30.07	30.01	30.07	70	79	72	69	82	56	70	6.1	ne.	3	0.00
19...	30.09	30.05	30.14	66	79	73	66	82	66	73	6.3	n.w., ne.	2	8.80 w.
20...	30.15	30.09	30.16	72	75	75	71	83	60	70	6.6	ne.	3	8.70 w.
21...	30.16	30.08	30.14	72	79	73	72	82	74	80	7.1	ne.	3, 5	0.01
22...	30.14	30.07	30.12	72	78	72	71	82	66	80	6.8	ne.	4	0.16
23...	30.13	30.09	30.18	72	80	74	71	81	67	74	6.8	ne.	4	0.07
24...	30.18	30.12	30.18	73	81	74	72	83	67	67	6.5	ne.	4	0.02
25...	30.17	30.12	30.15	73	80	75	70	83	60	70	6.6	ne.	4	8.75 w.
26...	30.16	30.12	30.16	73	80	74	72	82	64	66	6.5	ne.	4	0.04
27...	30.17	30.13	30.20	73	80	75	71	82	69	66	6.2	ne.	4	0.01
28...	30.21	30.14	30.20	74	78	75	73	81	58	66	6.1	ene.	5	8.45 w.
29...	30.19	30.13	30.19	73	79	73	72	80	65	74	6.2	ne.	5	0.00
30...	30.19	30.13	30.19	72	78	74	70	80	74	70	6.6	ne.	5	0.03
Mean.	30.140	30.085	30.140	71.8	79.4	73.5	70.1	81.7			6.4			0.98
		30.112			74.9									

The barometer is corrected for temperature and reduced to sea level, but the gravity correction, -.06, is still to be applied.
 The absolute humidity is expressed in grains of water, per cubic foot, and is the average of four observations daily.
 The rain is measured at 6 a. m., daily.
 The extremes of the force of the wind are given when it has varied more than usual.
 4th, very dry air. 8th, convectional pillars of clouds. 10th, spiral whirl of lower clouds. 14th, light earthquake on Hawaii. 19th, lower clouds from east. 23th, disturbance.
 For the month of June pressure was .04 above normal; temperature 1.5° below normal; humidity and rainfall low.

METEOROLOGICAL TABLES.

[Prepared by the Division of Records and Meteorological Data.]

The following pages present in tabular form the climatological data for the current month, on which the text of the preceding part of this REVIEW has, to a large extent, been based.

For a detailed description of the methods of observation, compilation, and computation relating to these tables, the reader is referred to page 129 of the MONTHLY WEATHER REVIEW for March, 1894. The general contents of the tables are as follows:

Table I gives for 140 Weather Bureau stations, making two observations daily, and for 10 others making only one observation, the ordinary climatological data.

Table II gives for about 2,200 stations, occupied by voluntary observers, the mean and extreme temperatures and the total precipitation.

Table III gives climatological data for about 30 Canadian stations.

Table IV a gives for 38 Weather Bureau stations the percentages of sunshine for each hour of local mean time.

Table IV b gives for 43 Weather Bureau stations the total hourly rainfall for each hour of seventy-fifth meridian time.

Table V gives for 81 stations the mean temperatures for each hour of seventy-fifth meridian time.

Table VI gives for 66 stations the mean pressures for each hour of seventy-fifth meridian time.

Table VII gives for 138 stations the mean hourly movement of the wind.

Table VIII gives for 68 stations the resultant movements and directions of the wind from continuous registrations.

Table IX gives for 140 stations the component and resultant directions based on simultaneous observations at 8 a. m. and 8 p. m., seventy-fifth meridian time.

TABLE I.—Climatological data for Weather Bureau Stations, June, 1894.

Table with columns: Districts and stations, Elevation above sea-level, Length of record, Pressure, in inches, Temperature of the air, in degrees Fahrenheit, Humidity and precipitation, Wind, and Mean temperature data since opening of station. Rows include stations like Eastport, Portland, Boston, New York, Philadelphia, etc.

TABLE I.—Climatological data for Weather Bureau Stations, June, 1894—Continued.

Table with columns: Districts and stations, Elevation above sea-level, Length of record, Pressure, in inches, Temperature of the air, in degrees Fahrenheit, Humidity and precipitation, Wind, Mean temperature data since opening of station. Rows include stations like Davenport, Des Moines, Dubuque, Keokuk, Cairo, Springfield, Ill., Hannibal, Saint Louis, etc.

NOTE.—The data at stations having no departures are not used in computing the district averages. Letters of the alphabet denote number of days missing from the record. *Two or more directions, dates, or years. †Received too late to be considered in departures, etc. ‡Normals of temperature and precipitation and extremes of temperature combined with Fort Washakie records. || All temperature and precipitation normals and extremes of temperature are obtained from Fort Buford records.

TABLE II.—Meteorological record of voluntary and other co-operating observers, June, 1894.

Table with columns for Stations, Temperature (Fahrenheit) (Max, Min, Mean), and Precip'n. Includes sections for Alabama, Arkansas-Cont'd, and Arkansas.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit) (Max, Min, Mean), and Precip'n. Includes sections for California-Cont'd and California.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit) Max, Min, Mean, and Precip n. Includes entries for California, Connecticut, Delaware, Florida, and Idaho.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit) Max, Min, Mean, and Precip n. Includes entries for Idaho, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Massachusetts, Michigan, Minnesota, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin, Wyoming, and other locations.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns: Stations, Temperature (Fahrenheit), Precip'n. Includes entries for Kansas, Kentucky, and Massachusetts.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns: Stations, Temperature (Fahrenheit), Precip'n. Includes entries for Massachusetts, Michigan, and Minnesota.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit) (Max, Min, Mean), and Precip'n. Includes entries for Minnesota, Missouri, and Nebraska.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit) (Max, Min, Mean), and Precip'n. Includes entries for Nebraska, New Jersey, and New Mexico.

Meteorological record of voluntary observers, &c.—Continued.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns: Stations, Temperature (Fahrenheit) Max, Min, Mean, Precip'n. Includes entries for New York, N. Dakota, and North Carolina.

Table with columns: Stations, Temperature (Fahrenheit) Max, Min, Mean, Precip'n. Includes entries for Ohio, Oregon, and Pennsylvania.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit), and Precip'n. Includes sub-sections for Pennsylvania—Con., Rhode Island, South Carolina, South Dakota, and Texas.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit), and Precip'n. Includes sub-sections for Texas—Cont'd., Utah, Washington—Con., and Wisconsin.

Meteorological record of voluntary observers, &c.—Continued.

Table with columns for Stations, Temperature (Fahrenheit), and Precipitation. Includes sub-sections for Wisconsin, Wyoming, Mexico, and West Indies.

EXPLANATION OF SIGNS.

*Extremes of temperature from observed readings of dry thermometer. †Weather Bureau instruments. A numeral following the name of a station indicates the hours of observation from which the mean temperature was obtained, thus: 1 Mean of 7 a. m. + 2 p. m. + 9 p. m. + 9 p. m. + 4.

Reports received too late to be used in general discussion of weather for June, 1894.

Table listing weather reports for June 1894, categorized by state/region: Alabama, Arkansas, California, Colorado, Florida, Massachusetts, Missouri, New Hampshire, Pennsylvania, Nevada, Oregon, Rhode Island, Texas, Utah, Virginia, and West Virginia.

Received too late for publication in May, 1894.

Table listing weather reports for May 1894, categorized by state/region: Arizona, California, Idaho, Indiana, Kansas, Massachusetts, Michigan, Missouri, and Wyoming.

Table III—Data from Canadian stations for the month of June, 1894. Columns include Station, Pressure (Mean not reduced, Mean reduced, Departure from normal), Temperature (Mean, Departure from normal), Precipitation (Total, Departure from normal), and Prevailing direction of wind.

TABLE IV a.—Hourly sunshine as deduced from sunshine recorders, June, 1894.

Station.	Instrument.	Percentage for each hour of local mean time ending with the respective hour.																Monthly summary.				
		A. M.								Noon.	P. M.								Instrumental record.			Personal estimate.
		5	6	7	8	9	10	11	1		2	3	4	5	6	7	8	Actual.	Possible.	Per cent of possible.		
Baltimore, Md.	P. I.	47	53	58	81	87	86	80	90	90	95	97	95	84	75	56	45	Hours.	Hours.	80	66	
Bismarck, N. Dak.	P. I.	70	69	66	68	78	79	80	86	86	85	83	82	74	63	46	21	354.8	445.4	77	67	
Boston, Mass.	P. I.	21	41	56	60	67	67	81	86	86	82	86	86	74	68	48	21	341.6	476.0	72	40	
Buffalo, N. Y.	P. I.	13	13	34	64	82	82	84	88	88	82	82	82	67	67	50	26	286.1	459.4	62	40	
Chicago, Ill.	P. I.	13	13	34	64	82	82	84	88	88	82	82	82	67	67	50	26	296.6	459.6	64	33	
Cincinnati, Ohio	P. I.	62	70	80	84	84	84	84	86	86	86	86	86	75	75	45	50	323	454.9	71	71	
Cleveland, Ohio	P. I.	62	70	80	84	84	84	84	86	86	86	86	86	75	75	45	50	323	454.9	71	71	
Colorado Springs, Colo.	P. I.	62	70	80	84	84	84	84	86	86	86	86	86	75	75	45	50	323	454.9	71	71	
Columbus, Ohio	P. I.	62	70	80	84	84	84	84	86	86	86	86	86	75	75	45	50	323	454.9	71	71	
Denver, Colo.	P. I.	78	82	85	84	82	83	83	85	85	84	84	84	74	74	49	49	347	446.6	77	77	
Des Moines, Iowa	P. I.	74	72	75	82	86	86	86	86	86	85	85	85	74	74	49	49	344	445.2	77	68	
Detroit, Mich.	P. I.	50	36	45	70	87	87	87	87	87	85	85	85	61	61	37	37	355	455.7	74	61	
Dodge City, Kans.	P. I.	50	36	45	70	87	87	87	87	87	85	85	85	61	61	37	37	355	455.7	74	61	
Eastport, Me.	P. I.	10	11	11	20	20	20	20	31	31	43	43	43	34	34	13	7	145	419.5	31	29	
Galveston, Tex.	P. I.	10	11	11	20	20	20	20	31	31	43	43	43	34	34	13	7	145	419.5	31	29	
Helena, Mont.	P. I.	39	44	46	66	66	66	66	78	78	83	83	83	61	61	25	25	307	475.0	43	45	
Kansas City, Mo.	P. I.	39	44	46	66	66	66	66	78	78	83	83	83	61	61	25	25	307	475.0	43	45	
Key West, Fla.	P. I.	74	73	73	84	84	84	84	84	84	84	84	84	74	74	44	44	343	445.5	73	73	
Little Rock, Ark.	P. I.	74	73	73	84	84	84	84	84	84	84	84	84	74	74	44	44	343	445.5	73	73	
Louisville, Ky.	P. I.	67	76	86	87	87	87	87	87	87	85	85	85	61	61	31	31	345	434.4	78	78	
Memphis, Tenn.	P. I.	48	58	67	82	82	82	82	82	82	85	85	85	57	57	25	25	345	445.4	66	66	
New Haven, Conn.	P. I.	11	17	20	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
New Orleans, La.	P. I.	11	17	20	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
New York, N. Y.	P. I.	14	14	27	45	45	45	45	77	77	77	77	77	42	42	12	12	243	419.0	59	59	
Philadelphia, Pa.	P. I.	14	14	27	45	45	45	45	77	77	77	77	77	42	42	12	12	243	419.0	59	59	
Portland, Me.	P. I.	6	19	28	35	35	35	35	66	66	66	66	66	41	41	15	15	163	459.0	35	35	
Portland, Ore.	P. I.	11	11	20	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
Rochester, N. Y.	P. I.	24	23	28	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
St. Louis, Mo.	P. I.	77	77	77	86	86	86	86	86	86	86	86	86	75	75	44	44	402	443.1	94	94	
Salt Lake City, Utah	P. I.	77	77	77	86	86	86	86	86	86	86	86	86	75	75	44	44	402	443.1	94	94	
San Diego, Cal.	P. I.	10	10	10	29	29	29	29	66	66	66	66	66	47	47	17	17	275	428.2	62	62	
San Francisco, Cal.	P. I.	13	13	22	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
Santa Fe, N. Mex.	P. I.	62	75	85	85	85	85	85	85	85	85	85	85	75	75	45	45	364	434.4	88	88	
Savannah, Ga.	P. I.	40	33	33	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
Tucson, Ariz.	P. I.	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	96	100	100	99	99	
Vicksburg, Miss.	P. I.	31	35	35	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
Washington, D. C.	P. I.	46	46	46	66	66	66	66	86	86	86	86	86	75	75	31	15	344	434.4	33	49	
Wilmington, N. C.	P. I.	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68	68

* Record for 26 days only.

TABLE IV b.—Hourly precipitation, June, 1894.

Station.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Total.
Atlanta, Ga.	0.00	0.00	T.	0.03	T.	0.01	0.01	0.17	0.00	0.00	0.00	0.00	0.00	0.00	T.	0.05	0.05	0.19	0.07	0.03	0.01	0.05	0.05	0.07	1.28
Baltimore, Md.	0.00	0.21	0.03	0.03	0.01	0.01	0.33	0.04	0.12	0.10	0.10	0.00	0.12	0.00	0.05	0.05	0.27	0.19	0.07	0.10	0.01	0.05	0.05	0.07	3.29
Bismarck, N. Dak.	0.00	0.00	0.05	0.05	0.01	0.01	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.15	0.15	0.08	0.08	0.08	0.11	0.20	0.21	0.10	0.10	1.72
Boston, Mass.	0.04	T.	0.05	0.05	T.	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.08	0.30	0.15	T.	0.00	0.01	0.01	0.04	0.05	0.01	0.01	0.01	0.67
Buffalo, N. Y.	0.07	0.05	0.37	0.10	0.01	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.24	0.03	0.03	0.27	0.14	0.08	0.05	0.04	0.01	0.00	0.00	0.00	1.79
Chicago, Ill.	0.07	0.05	0.37	0.10	0.01	0.01	0.00	0.06	0.00	0.00	0.00	0.00	0.24	0.03	0.03	0.27	0.14	0.08	0.05	0.04	0.01	0.00	0.00	0.00	4.04
Cincinnati, Ohio	0.65	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.15	0.15	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02	2.37
Cleveland, Ohio	0.65	0.05	0.05	0.05	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.19	0.15	0.15	0.04	0.04	0.02	0.02	0.02	0.02	0.02	0.02	2.37
Denver, Colo.	0.22	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.60
Detroit, Mich.	0.62	0.67	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.63
Dodge City, Kans.	0.33	0.27	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.63
Duluth, Minn.	0.07	T.	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	2.80
Eastport, Me.	0.07	0.38	0.23	0.21	0.17	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	0.06	1.74
Galveston, Tex.	0.00	0.02	0.12	1.89	0.12	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	3.76
Indianapolis, Ind.	T.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.75
Jacksonville, Fla.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	4.22
Jupiter, Fla.	T.	0.05	0.05	0.05	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02	8.16
Kansas City, Mo.	0.42	0.35	0.39	0.34	0.54	0.33	0.07	0.07	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	3.27
Key West, Fla.	0.01	0.03	T.	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	1.90
Marquette, Mich.	T.	0.03	T.	0.04	0.04	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	2.60
Memphis, Tenn.	0.81	0.20	0.10	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	3.41
Milwaukee, Wis.	0.16	0.06	0.05	0.01	0.01	0.01	0.01	0.0																	

TABLE V.—Mean temperature for each hour of seventy-fifth meridian time, June, 1894.

Table with 24 columns (1 a.m. to Mean) and 100 rows of station names and their corresponding temperature data for each hour.

* For 26 days.

TABLE VI.—Mean pressure for each hour of seventy-fifth meridian time, June, 1894.

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.
Abilene, Tex.....	28.191	.194	.195	.195	.195	.205	.219	.226	.239	.245	.246	.245	.228	.208	.187	.173	.152	.137	.134	.138	.155	.169	.185	.190	.194
Albany, N. Y.....	29.869	.868	.868	.872	.881	.887	.893	.895	.894	.890	.883	.874	.861	.853	.843	.839	.836	.841	.840	.857	.870	.876	.883	.885	.870
Alpena, Mich.....	29.293	.287	.287	.286	.290	.297	.302	.301	.299	.295	.293	.292	.284	.282	.273	.268	.265	.263	.268	.273	.283	.291	.292	.295	.286
Atlanta, Ga.....	28.910	.911	.913	.913	.923	.937	.948	.963	.967	.966	.960	.949	.929	.912	.894	.881	.872	.867	.875	.881	.900	.911	.916	.917	.917
Augusta, Ga.....	29.887	.885	.884	.886	.892	.904	.916	.928	.932	.930	.923	.913	.892	.872	.848	.836	.830	.830	.839	.856	.869	.889	.891	.892	.884
Baltimore, Md.....	29.807	.801	.799	.806	.818	.827	.833	.838	.838	.836	.833	.824	.811	.798	.788	.778	.775	.781	.786	.797	.807	.814	.818	.818	.810
Bismarck, N. Dak...	28.097	.104	.104	.102	.103	.110	.115	.121	.121	.126	.120	.113	.103	.093	.081	.072	.066	.068	.052	.052	.058	.070	.083	.087	.092
Boston, Mass.....	29.820	.819	.818	.820	.831	.836	.843	.844	.840	.835	.831	.820	.808	.802	.796	.791	.792	.798	.806	.817	.829	.834	.838	.836	.821
Buffalo, N. Y.....	29.235	.232	.228	.234	.243	.254	.262	.266	.269	.269	.272	.266	.256	.247	.241	.237	.231	.239	.235	.239	.251	.253	.253	.250	.248
Chicago, Ill.....	29.142	.119	.122	.124	.130	.139	.151	.160	.161	.158	.154	.150	.143	.129	.118	.108	.098	.096	.094	.095	.107	.118	.120	.121	.128
Cincinnati, Ohio...	29.360	.357	.356	.361	.373	.383	.395	.403	.399	.399	.396	.388	.374	.360	.347	.336	.328	.328	.333	.335	.348	.358	.364	.364	.364
Cleveland, Ohio...	29.201	.198	.202	.208	.218	.231	.243	.252	.253	.249	.246	.243	.232	.219	.209	.199	.193	.191	.194	.201	.208	.214	.211	.206	.211
Colorado Sp'gs, Colo	24.044	.046	.045	.045	.047	.052	.063	.068	.090	.068	.060	.053	.040	.025	.012	.001	.003	.074	.069	.079	.086	.004	.028	.036	.029
Columbus, Ohio.....	29.118	.113	.113	.118	.126	.140	.150	.158	.155	.155	.154	.146	.137	.122	.107	.095	.086	.084	.086	.094	.105	.115	.119	.122	.122
Denver, Colo.....	24.745	.748	.745	.747	.754	.757	.754	.758	.763	.765	.758	.753	.743	.731	.714	.703	.695	.689	.685	.688	.697	.709	.729	.738	.731
Des Moines, Iowa...	29.050	.051	.054	.057	.061	.071	.079	.085	.094	.092	.085	.079	.065	.051	.035	.024	.012	.005	.005	.003	.013	.027	.036	.042	.049
Detroit, Mich.....	29.215	.214	.212	.214	.223	.232	.240	.247	.247	.242	.238	.233	.222	.212	.200	.190	.184	.188	.193	.196	.206	.214	.218	.221	.217
Dodge City, Kans...	27.374	.372	.372	.368	.367	.367	.371	.381	.392	.395	.390	.389	.384	.374	.356	.344	.329	.320	.314	.315	.324	.322	.322	.325	.319
Duluth, Minn.....	29.201	.202	.202	.205	.211	.218	.226	.232	.233	.227	.224	.216	.207	.196	.189	.181	.171	.169	.170	.174	.186	.186	.192	.195	.200
Eastport, Me.....	29.847	.844	.842	.846	.852	.857	.862	.864	.863	.862	.856	.849	.840	.833	.824	.818	.818	.823	.833	.843	.854	.868	.859	.857	.846
El Paso, Tex.....	26.143	.147	.148	.150	.156	.161	.175	.192	.207	.216	.212	.206	.193	.179	.159	.136	.118	.101	.085	.080	.081	.093	.116	.134	.150
Galveston, Tex.....	29.016	.007	.999	.999	.002	.008	.016	.028	.038	.040	.046	.040	.045	.035	.028	.014	.007	.006	.994	.000	.007	.017	.023	.025	.018
Grand Haven, Mich...	29.290	.289	.294	.295	.304	.308	.316	.323	.327	.327	.324	.322	.316	.309	.300	.288	.279	.275	.273	.274	.282	.286	.291	.294	.299
Havre, Mont.....	27.238	.243	.244	.246	.245	.248	.256	.259	.262	.261	.260	.258	.250	.242	.235	.232	.226	.222	.222	.217	.222	.226	.238	.246	.242
Helena, Mont.....	25.784	.789	.790	.791	.792	.793	.793	.796	.797	.802	.800	.793	.785	.774	.762	.750	.754	.752	.753	.755	.763	.770	.785	.792	.781
Huron, S. Dak.....	28.505	.503	.504	.505	.511	.515	.520	.528	.536	.533	.523	.516	.508	.493	.479	.466	.459	.454	.446	.448	.456	.469	.486	.496	.494
Indianapolis, Ind...	29.209	.211	.212	.212	.219	.230	.239	.245	.249	.248	.247	.243	.229	.216	.203	.193	.187	.183	.183	.189	.192	.200	.207	.211	.215
Jacksonville, Fla...	30.050	.045	.043	.044	.052	.062	.072	.077	.075	.075	.071	.059	.045	.032	.015	.010	.009	.013	.024	.035	.050	.058	.061	.059	.047
Kansas City, Mo...	28.988	.990	.993	.991	.996	.007	.015	.024	.032	.031	.029	.026	.021	.007	.988	.978	.961	.952	.949	.952	.967	.970	.980	.983	.992
Key West, Fla.....	30.049	.038	.033	.033	.036	.047	.061	.069	.074	.077	.079	.076	.066	.053	.037	.026	.022	.027	.038	.052	.060	.067	.068	.064	.052
Knoxville, Tenn...	29.049	.045	.044	.048	.057	.068	.080	.091	.095	.093	.088	.078	.063	.043	.027	.013	.005	.002	.010	.018	.027	.042	.049	.050	.049
Little Rock, Ark...	29.724	.722	.721	.725	.731	.742	.757	.768	.779	.777	.773	.766	.751	.732	.712	.693	.682	.678	.681	.683	.692	.709	.718	.722	.727
Louisville, Ky.....	29.471	.468	.468	.471	.479	.489	.504	.513	.517	.515	.510	.500	.487	.472	.458	.447	.436	.432	.432	.442	.453	.465	.471	.473	.474
Lynchburg, Va.....	29.324	.324	.327	.331	.343	.351	.363	.365	.364	.366	.358	.344	.326	.312	.295	.288	.275	.281	.292	.303	.321	.330	.332	.333	.327
Marquette, Mich...	29.145	.141	.139	.141	.147	.152	.161	.163	.169	.171	.170	.169	.160	.155	.150	.146	.140	.137	.137	.134	.142	.146	.145	.146	.150
Memphis, Tenn....	29.708	.699	.698	.702	.710	.721	.736	.750	.755	.755	.755	.748	.734	.719	.703	.689	.681	.677	.678	.677	.686	.702	.707	.710	.712
Milwaukee, Wis...	29.252	.253	.256	.262	.268	.279	.287	.293	.294	.287	.285	.284	.279	.272	.261	.249	.240	.233	.234	.233	.242	.254	.255	.254	.263
Moorhead, Minn...	28.872	.872	.875	.876	.883	.887	.896	.902	.900	.900	.895	.889	.877	.869	.856	.853	.844	.835	.831	.835	.835	.852	.855	.864	.869
Nantucket, Mass...	29.985	.983	.983	.986	.993	.999	.004	.009	.009	.010	.007	.003	.996	.991	.983	.977	.976	.981	.985	.988	.003	.004	.007	.006	.993
Nashville, Tenn...	29.467	.462	.458	.464	.472	.483	.496	.506	.510	.507	.503	.495	.479	.462	.440	.429	.423	.427	.436	.442	.455	.467	.468	.466	.467
New Haven, Conn...	29.851	.850	.850	.854	.861	.868	.873	.871	.872	.870	.864	.856	.847	.837	.826	.821	.819	.825	.834	.845	.862	.863	.867	.869	.852
New Orleans, La...	29.998	.993	.991	.993	.000	.012	.023	.032	.040	.039	.036	.032	.024	.014	.002	.991	.979	.976	.977	.981	.992	.999	.006	.004	.006
New York, N. Y....	29.796	.798	.793	.796	.803	.813	.817	.822	.820	.819	.817	.810	.801	.792	.783	.775	.768	.772	.779	.788	.802	.808	.813	.813	.800
Norfolk, Va.....	29.982	.972	.975	.977	.989	.996	.002	.007	.005	.004	.006	.983	.971	.959	.953	.948	.953	.960	.970	.984	.991	.993	.993	.982	.982
Omaha, Neb.....	28.799	.797	.799	.801	.806	.813	.819	.821	.828	.829	.823	.817	.807	.795	.782	.769	.758	.747	.740	.749	.757	.770	.785	.789	.792
Philadelphia, Pa...	29.881	.879	.877	.877	.885	.894	.902	.907	.907	.908	.904	.899	.886	.878	.867	.860	.855	.857	.864	.871	.883	.888	.894	.895	.884
Pikes Peak, Colo...	17.899	.888	.877	.869	.860	.857	.858	.863	.874	.891	.900	.907	.911	.912	.909	.908	.909	.903	.898	.903	.905	.909	.913	.893	.893
Pittsburg, Pa.....	29.155	.157	.155	.157	.166	.174	.184	.190	.199	.186	.180	.172	.161	.146	.135	.127	.122	.121	.129	.137	.147	.155	.160	.162	.157
Portland, Ore.....	29.865	.868	.869	.870	.872	.873	.880	.882	.886	.889</															

TABLE VII.—Average wind movement for each hour of seventy-fifth meridian time, June, 1894.

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.	
Abilene, Tex.....	10.9	11.3	11.4	10.9	11.1	10.8	9.6	9.9	12.2	13.6	13.7	13.1	12.9	12.7	12.6	12.2	13.2	13.1	13.1	12.2	10.8	10.1	10.4	11.2	11.8	
Albany, N. Y.....	4.4	3.9	3.8	4.3	4.4	4.5	5.8	6.6	7.2	7.9	8.5	9.6	10.2	10.1	10.2	10.8	9.1	7.8	6.7	5.4	4.5	4.4	4.6	4.5	6.6	
Alpena, Mich.....	5.6	5.9	5.6	5.5	5.5	5.9	6.0	7.0	7.4	8.2	9.7	10.6	11.0	11.6	12.1	11.4	10.8	9.3	9.0	7.5	5.5	5.5	5.2	5.0	7.8	
Amarillo, Tex.....	18.2	18.6	18.6	18.4	18.4	18.5	18.2	16.5	16.5	16.6	21.0	19.7	17.9	18.7	18.6	19.8	20.8	21.4	21.5	22.0	20.1	18.7	18.5	17.9	19.2	
Atlanta, Ga.....	8.2	8.0	7.5	7.4	7.0	7.2	6.6	6.5	6.6	6.6	6.8	6.7	7.5	8.0	9.2	9.7	9.6	9.6	8.0	6.9	7.1	7.8	8.5	8.4	7.7	
Atlantic City, N. J.....	9.2	10.0	9.5	9.8	9.9	9.3	9.7	10.8	10.6	10.7	12.1	12.4	12.1	13.0	13.1	13.2	12.4	11.6	10.9	10.8	10.8	10.6	10.0	10.7	11.0	
Augusta, Ga.....	3.7	3.3	3.1	2.5	2.3	2.3	2.4	3.0	3.6	3.8	4.3	4.9	6.0	6.2	6.8	7.3	6.7	7.5	6.8	6.8	5.8	4.1	4.4	3.8	4.6	
Baker City, Ore.....	3.2	2.7	2.8	3.0	3.3	3.9	4.4	4.4	4.2	3.9	2.3	3.3	3.9	4.6	6.4	6.5	6.7	7.3	6.7	7.5	7.7	6.7	3.9	3.1	4.7	
Baltimore, Md.....	5.2	5.5	5.1	4.4	4.4	4.2	4.9	5.9	7.0	7.8	8.5	8.5	8.8	8.9	8.6	8.8	8.9	7.5	6.2	5.3	5.1	4.9	5.4	5.2	6.5	
Bismarck, N. Dak.....	8.0	7.4	6.3	6.2	6.5	7.0	6.6	6.9	8.2	11.4	11.9	12.2	12.9	13.7	14.4	15.0	14.2	13.8	13.2	12.5	10.9	8.9	9.1	9.0	10.3	
Block Island, R. I.....	14.7	14.1	13.3	12.6	11.1	11.4	13.4	14.2	15.3	15.5	15.7	16.7	17.9	18.9	19.5	19.4	18.7	18.0	17.9	17.4	16.9	16.4	15.9	14.9	15.8	
Boston, Mass.....	9.6	9.3	9.5	9.3	9.2	8.7	9.3	9.8	10.1	10.1	10.0	11.0	12.0	13.1	13.2	13.2	12.9	11.9	11.3	10.2	10.0	9.9	9.9	9.2	10.5	
Buffalo, N. Y.....	7.9	8.2	7.7	8.1	8.0	8.3	9.1	10.0	10.2	11.1	12.0	12.0	12.4	12.7	11.8	11.5	10.9	10.5	8.8	8.9	8.4	8.1	7.6	7.9	9.7	
Cairo, Ill.....	5.2	5.2	4.8	4.9	5.2	5.4	5.0	5.8	6.4	6.5	6.7	7.2	8.0	8.9	9.2	9.8	9.4	8.5	8.0	6.3	5.1	5.2	4.9	4.7	6.5	
Cape Henry, Va.....	12.8	13.7	12.6	12.1	12.9	12.1	12.7	13.2	12.2	11.9	11.6	12.2	11.0	11.7	11.6	13.0	12.5	12.5	10.7	10.6	11.0	11.4	12.1	12.7	12.1	
Charleston, S. C.....	5.8	5.7	5.7	5.0	5.1	4.6	4.8	5.6	5.9	6.4	8.1	10.0	11.0	11.9	11.9	11.9	11.6	11.4	10.8	9.2	8.2	7.5	7.2	6.1	8.0	
Charlotte, N. C.....	5.2	5.0	5.4	5.2	4.8	4.3	4.6	5.4	6.6	6.5	7.1	7.0	7.0	6.8	7.1	7.6	7.5	6.4	5.8	5.7	5.1	5.5	5.3	5.3	5.9	
Chattanooga, Tenn.....	4.6	4.3	4.5	4.2	4.6	3.9	3.6	4.8	6.0	6.1	6.3	6.7	7.6	8.1	8.8	8.4	8.2	8.9	7.8	6.5	5.7	5.1	4.3	4.4	6.0	
Cheyenne, Wyo.....	10.6	9.8	8.3	9.4	8.6	7.9	7.8	8.4	9.4	11.0	12.3	13.9	14.6	15.3	15.3	15.3	16.1	15.2	14.2	15.8	14.5	10.4	10.4	10.4	11.9	
Chicago, Ill.....	15.6	16.0	17.3	16.9	15.8	16.1	15.9	15.0	13.9	13.6	13.9	13.9	14.8	14.8	15.5	15.4	14.3	14.5	13.2	12.7	13.3	13.9	14.1	15.2	14.8	
Cincinnati, Ohio.....	4.0	3.5	3.2	3.1	3.5	3.4	3.4	4.3	5.1	6.0	6.9	7.4	8.5	8.5	8.6	9.6	8.7	7.9	7.4	5.9	4.8	4.4	3.6	3.7	5.6	
Cleveland, Ohio.....	8.8	8.8	9.0	8.4	8.6	8.4	8.8	8.7	9.3	9.9	10.3	11.1	12.0	12.7	12.8	12.7	11.0	9.5	7.4	6.1	7.7	7.8	8.4	7.8	9.4	
Colorado Springs, Colo.....	7.9	7.9	8.0	8.3	7.7	7.7	7.2	6.5	6.4	6.6	6.8	10.2	11.6	13.8	14.6	15.6	15.1	15.4	14.4	14.5	11.9	9.2	9.1	8.7	10.3	
Columbia, Mo.....	4.2	3.7	4.0	3.8	3.6	3.3	3.8	4.4	5.0	6.3	6.9	7.4	8.1	8.1	8.1	8.6	8.4	7.8	7.0	5.5	4.4	4.1	4.7	4.5	5.7	
Columbus, Ohio.....	5.2	5.4	5.0	4.8	4.2	4.2	4.4	5.0	6.0	6.5	7.7	9.4	10.2	10.8	12.3	11.1	10.5	10.0	8.2	7.2	6.6	6.8	6.5	5.9	7.3	
Concordia, Kans.....	6.3	5.9	5.3	5.5	4.8	4.5	4.8	5.0	6.8	8.3	8.3	8.6	9.5	10.1	10.2	10.6	10.1	10.2	9.1	7.9	6.1	6.3	5.9	6.1	7.4	
Corpus Christi, Tex.....	15.0	12.9	11.7	10.4	8.8	8.9	8.1	7.7	9.5	10.7	11.8	13.1	14.8	16.3	17.3	18.1	19.1	19.8	20.1	19.5	19.1	18.7	17.9	16.6	14.4	
Davenport, Iowa.....	6.8	6.1	5.1	4.8	5.3	5.6	5.5	5.6	6.3	7.6	8.5	9.8	10.2	10.5	11.0	11.2	11.6	11.0	9.8	8.0	6.3	6.1	5.5	5.5	7.7	
Denver, Colo.....	7.2	7.0	6.4	6.4	6.2	5.9	6.1	5.4	6.0	6.7	6.8	7.5	9.3	10.3	11.2	12.7	12.8	12.2	11.2	10.2	8.7	8.0	6.8	7.3	8.3	
Des Moines, Iowa.....	5.1	5.2	4.4	4.0	3.8	4.0	4.2	4.9	6.3	7.3	8.4	8.5	9.5	10.2	10.8	11.0	11.1	10.5	9.0	7.9	7.5	6.5	5.4	5.3	7.4	
Detroit, Mich.....	7.2	7.7	8.1	7.6	6.9	7.0	6.9	7.5	8.7	9.7	10.6	11.4	11.9	12.9	12.5	12.2	11.5	10.5	8.3	8.4	7.4	7.7	7.1	7.1	9.0	
Dodge City, Kans.....	13.2	13.2	13.2	11.2	10.2	10.2	10.1	10.8	13.6	15.5	16.7	16.9	16.8	16.5	17.0	17.6	17.7	17.7	18.7	19.1	19.7	17.8	16.6	16.1	14.3	15.1
Dubuque, Iowa.....	4.6	5.2	5.2	5.2	5.7	5.0	5.0	5.1	5.4	6.4	6.9	7.0	7.6	7.8	7.7	7.7	7.6	6.8	6.4	5.7	5.0	4.8	5.0	4.3	5.9	
Duluth, Minn.....	5.9	5.5	5.5	5.1	5.7	5.3	5.5	5.8	5.9	6.7	7.2	8.0	9.0	8.6	8.2	9.7	9.4	8.4	7.5	7.4	7.3	7.6	6.2	5.8	7.0	
El Paso, Tex.....	7.7	8.1	8.8	8.4	8.2	8.1	8.8	8.5	8.0	8.6	9.7	10.1	9.8	9.4	9.1	10.3	10.7	11.1	11.4	11.8	10.6	7.4	6.5	7.2	9.1	
Erie, Pa.....	8.4	8.3	8.1	8.6	7.9	8.0	7.9	7.4	8.0	8.8	9.2	10.1	10.8	11.0	10.1	9.1	8.6	8.1	6.5	6.1	6.2	7.2	7.5	7.8	8.3	
Eureka, Cal.....	6.9	7.1	5.9	5.2	4.6	4.5	4.3	4.1	3.7	4.5	5.1	6.9	8.1	9.3	10.7	11.6	11.8	12.4	12.5	12.0	11.3	9.9	8.3	7.3	7.8	
Fort Canby, Wash.....	9.2	8.8	9.1	8.6	7.8	7.8	7.7	7.9	7.4	7.8	7.8	7.9	9.0	9.6	9.9	10.4	10.9	11.7	12.4	12.2	12.4	12.4	10.5	10.6	9.6	
Fort Smith, Ark.....	4.4	4.3	4.3	4.7	4.2	4.7	4.4	5.4	6.1	5.8	6.8	6.5	7.4	8.9	9.0	9.4	9.2	8.6	7.6	6.8	6.1	5.7	5.1	5.0	6.3	
Fresno, Cal.....	10.9	11.2	10.9	10.2	9.4	9.1	7.4	6.7	6.8	7.1	7.5	7.4	6.4	6.1	6.0	6.2	6.3	6.7	7.1	7.9	9.1	9.6	9.6	11.1	8.2	
Galveston, Tex.....	11.1	10.9	11.1	10.6	10.6	9.7	9.5	9.4	10.0	10.5	10.5	10.5	11.0	11.6	11.4	11.2	11.2	11.2	11.0	11.2	10.8	11.1	11.3	10.8	10.8	
Grand Haven, Mich.....	6.8	6.6	6.6	6.9	7.2	7.0	7.0	7.5	8.4	9.1	10.1	10.2	10.6	10.7	10.6	10.2	9.1	8.3	6.4	5.1	4.6	5.3	5.2	6.7	7.8	
Green Bay, Wis.....	6.3	6.1	6.1	6.4	6.0	5.7	5.4	6.6	7.7	8.4	8.6	8.8	9.1	9.3	9.9	10.4	10.2	9.7	8.2	8.1	7.4	6.8	6.4	6.7	7.7	
Hannibal, Mo.....	7.2	6.5	6.4	6.9	5.7	5.0	5.2	6.1	7.3	8.5	9.3	10.2	10.0	10.9	10.7	10.4	9.6	9.6	8.7	7.9	7.1	7.4	7.9	7.4	8.0	
Harrisburg, Pa.....	4.1	4.1	4.4	4.2	4.0	4.3	4.3	5.1	5.7	6.3	6.7	7.3	7.8	7.5	7.5	7.6	6.4	6.9	5.3	4.6	4.6	4.5	4.3	3.7	5.5	
Hatteras, N. C.....	13.4	12.4	12.1	11.5	11.6	11.9	12.2	12.1	12.7	12.4	13.1	13.1	13.4	14.3	14.2	14.9	15.0	13.7	13.3	12.9	12.2	12.1	12.1	12.3	12.9	
Havre, Mont.....	6.2	7.7	7.2	6.0	6.1	6.6	6.6	7.2	9.5	10.6	12.1	12.2	11.8	12.5	12.5	12.3	13.0	11.7	11.3	11.3	10.3	8.0	7.0	6.3	9.4	
Helena, Mont.....	7.4	7.6																								

TABLE VII.—Average wind movement, etc.—Continued.

Stations.	1 a. m.	2 a. m.	3 a. m.	4 a. m.	5 a. m.	6 a. m.	7 a. m.	8 a. m.	9 a. m.	10 a. m.	11 a. m.	Noon.	1 p. m.	2 p. m.	3 p. m.	4 p. m.	5 p. m.	6 p. m.	7 p. m.	8 p. m.	9 p. m.	10 p. m.	11 p. m.	Midnight.	Mean.
Oswego, N. Y.....	6.5	7.2	7.3	7.4	7.8	7.8	7.5	8.5	8.8	9.3	9.6	9.9	9.7	9.5	8.9	8.4	8.3	7.1	5.9	6.4	6.7	7.1	6.8	6.7	7.9
Palestine, Tex.....	5.1	5.3	5.0	5.3	5.4	4.7	4.7	5.4	6.6	7.4	7.3	6.9	6.0	7.1	7.3	7.3	6.9	6.7	6.2	6.0	4.6	4.9	5.3	5.2	6.0
Parkersburg, W. Va.....	9.3	9.1	2.5	2.7	2.6	2.5	2.7	3.1	4.4	4.5	5.2	5.1	5.8	5.6	6.2	6.7	5.9	6.0	4.8	3.5	3.2	3.3	2.8	2.8	4.1
Pensacola, Fla.....	9.5	6.9	6.4	7.6	7.3	7.2	6.8	7.7	9.1	8.8	9.4	10.4	10.6	11.6	11.9	12.6	13.1	12.4	11.3	9.2	8.1	8.2	7.6	6.3	8.9
Philadelphia, Pa.....	7.5	7.7	7.7	7.6	6.9	6.9	7.7	9.1	9.2	9.6	9.8	9.7	10.7	11.0	10.9	10.6	11.3	11.1	9.8	8.5	8.4	7.9	8.2	8.5	9.0
Pierre, S. Dak.....	26.7	28.5	31.3	32.4	32.2	32.4	31.7	30.5	29.7	28.6	25.7	22.6	22.3	24.2	23.4	22.8	24.5	24.0	23.9	25.1	24.5	24.3	24.2	25.0	26.7
Pikes Peak, Colo.....	3.4	3.3	3.1	3.2	3.4	2.8	3.3	3.9	4.8	5.8	6.5	7.0	7.7	7.7	7.3	7.5	7.5	7.8	6.5	5.4	4.5	3.7	3.6	3.2	5.1
Pittsburg, Pa.....	5.4	5.7	5.3	5.1	5.1	4.7	4.4	4.1	3.3	3.3	4.3	4.9	5.2	5.7	6.8	6.2	7.1	7.5	8.5	9.7	9.7	8.6	8.4	9.4	9.9
Port Angeles, Wash.....	7.7	8.1	8.1	8.2	7.4	7.2	6.8	7.4	8.0	8.7	10.3	11.0	12.2	12.6	12.5	12.1	11.1	10.1	8.7	7.3	7.2	7.9	7.9	8.0	9.0
Port Huron, Mich.....	5.3	5.4	5.1	4.6	4.3	4.7	4.7	5.6	6.3	6.9	8.3	8.7	10.0	10.2	10.1	9.9	9.7	9.3	8.3	7.7	7.2	6.3	6.3	5.7	5.6
Portland, Me.....	9.6	8.8	8.9	8.2	6.9	5.7	5.4	5.0	5.5	6.5	7.9	7.2	7.6	8.1	8.7	8.9	10.2	10.2	10.1	10.3	9.7	9.6	10.4	9.2	8.1
Portland, Ore.....	9.6	8.8	8.9	8.2	6.9	5.7	5.4	5.0	5.5	6.5	7.9	7.2	7.6	8.1	8.7	8.9	10.2	10.2	10.1	10.3	9.7	9.6	10.4	9.2	8.1
Pueblo, Colo.....	9.6	8.8	8.9	8.2	6.9	5.7	5.4	5.0	5.5	6.5	7.9	7.2	7.6	8.1	8.7	8.9	10.2	10.2	10.1	10.3	9.7	9.6	10.4	9.2	8.1
Raleigh, N. C.....	9.6	8.8	8.9	8.2	6.9	5.7	5.4	5.0	5.5	6.5	7.9	7.2	7.6	8.1	8.7	8.9	10.2	10.2	10.1	10.3	9.7	9.6	10.4	9.2	8.1
Rapid City, S. Dak.....	6.1	4.7	4.7	4.5	4.0	4.5	5.1	5.7	6.0	6.4	6.1	6.1	6.8	7.4	7.4	6.8	6.9	6.3	4.9	4.1	4.0	4.3	4.0	4.0	5.1
Red Bluff, Cal.....	6.8	6.9	8.2	8.3	9.1	7.9	7.6	7.5	9.5	11.3	12.1	13.8	14.1	14.4	14.3	15.4	13.4	13.1	11.1	11.0	10.2	8.4	7.9	7.4	10.3
Red Bluff, Cal.....	7.5	7.0	6.4	6.1	5.8	5.4	4.7	4.9	5.2	6.0	7.8	7.8	7.4	7.1	7.3	8.0	8.3	7.7	7.8	7.8	7.9	8.2	7.4	7.4	7.0
Rochester, N. Y.....	5.5	5.7	5.7	6.0	5.9	6.2	6.5	7.6	7.8	8.5	8.7	9.1	10.1	10.0	9.8	9.6	9.6	8.6	7.1	6.1	6.2	6.2	5.6	5.4	7.4
Roseburg, Ore.....	2.0	2.0	1.6	1.8	1.5	1.4	1.4	1.4	1.7	2.3	2.7	3.2	3.8	4.1	4.7	5.2	5.8	7.0	7.2	7.2	7.2	6.9	5.2	3.7	3.8
Sacramento, Cal.....	9.6	9.6	9.1	9.5	9.0	8.9	8.9	8.8	8.8	8.6	8.6	8.6	9.1	9.5	9.7	10.1	10.4	10.9	12.0	12.2	12.0	11.8	11.2	10.4	9.9
St. Louis, Mo.....	8.5	8.7	8.3	8.4	8.4	7.9	7.9	8.5	8.8	10.2	10.1	10.4	11.0	12.1	12.8	12.7	13.0	12.3	11.0	10.0	9.1	8.8	9.3	9.4	9.9
St. Paul, Minn.....	4.2	4.2	3.9	4.0	4.5	4.7	4.4	4.8	5.8	6.5	8.1	9.0	10.2	10.4	10.5	10.9	10.9	10.8	9.8	8.3	6.3	6.4	6.2	5.7	7.1
St. Vincent, Minn.....	7.2	7.2	7.2	7.4	7.1	7.2	7.4	7.6	8.4	9.1	10.2	11.3	12.0	13.4	13.3	13.0	12.1	11.5	11.3	9.6	7.6	6.6	6.8	7.9	9.3
Salt Lake City, Utah.....	5.0	5.2	5.1	4.9	4.4	4.4	4.8	4.3	4.3	4.9	5.9	7.3	9.0	9.4	10.2	10.3	9.9	9.7	9.7	9.2	6.7	5.5	5.8	5.3	6.7
San Antonio, Tex.....	2.7	2.9	3.2	3.4	3.2	3.4	3.2	3.2	3.1	3.4	3.9	5.1	7.2	8.6	9.4	9.8	9.6	9.4	9.1	8.4	7.4	5.7	4.6	3.5	5.6
San Diego, Cal.....	5.8	6.2	5.9	5.7	5.7	5.9	6.1	6.6	7.0	7.5	7.6	7.9	7.9	8.6	8.1	8.3	7.7	7.2	5.7	5.4	5.8	5.7	4.8	5.7	6.7
Sandusky, Ohio.....	13.2	12.3	10.9	10.4	9.5	9.5	8.5	8.2	8.2	8.1	9.5	9.8	10.5	12.9	16.6	19.3	21.7	22.7	23.8	22.7	21.2	19.1	17.6	14.8	14.2
San Francisco, Cal.....	9.3	7.9	7.5	7.4	6.8	6.0	5.6	5.4	5.4	6.2	7.7	9.1	9.6	11.6	12.3	12.1	12.9	12.4	13.0	12.9	11.1	8.2	7.7	8.0	9.0
Santa Fe, N. Mex.....	3.5	3.5	3.8	3.7	4.4	4.5	4.7	5.1	6.0	7.5	8.3	9.6	9.3	10.4	11.4	11.3	11.3	11.3	9.5	8.1	6.2	5.3	4.0	3.9	6.9
Sault Ste. Marie, Mich.....	5.5	5.5	5.6	5.1	4.6	5.2	5.2	5.7	6.1	6.6	6.7	7.3	8.0	8.6	9.6	10.2	11.3	10.9	9.5	7.7	7.0	6.8	6.3	6.1	7.1
Savannah, Ga.....	5.3	5.6	5.2	4.6	4.5	5.0	4.6	4.3	4.8	5.0	4.9	5.5	5.7	5.9	6.4	7.3	7.5	7.4	7.8	7.6	7.5	7.1	6.3	5.8	5.9
Seattle, Wash.....	5.1	4.7	4.8	4.2	4.2	3.9	4.0	4.2	4.7	5.7	7.0	7.2	7.3	7.1	6.7	7.5	7.9	7.9	6.7	6.1	5.2	5.3	6.1	6.0	5.9
Shreveport, La.....	8.8	8.6	8.4	7.9	8.1	8.4	8.8	8.8	9.9	11.5	14.0	15.1	15.5	17.2	17.5	16.8	17.1	15.7	14.4	13.0	11.6	10.2	8.8	8.8	11.9
Sioux City, Iowa.....	9.9	9.6	9.1	9.6	9.1	8.7	8.2	8.9	9.0	9.5	10.5	11.8	12.8	14.0	15.2	16.3	16.2	15.6	14.8	14.6	14.2	13.6	12.4	11.4	11.9
Southport, N. C.....	6.2	6.6	6.5	6.2	6.6	6.2	6.6	6.8	7.2	7.5	8.1	7.9	8.1	7.9	8.6	9.2	9.8	9.6	10.2	8.9	8.4	7.4	6.2	5.8	7.6
Spokane, Wash.....	6.2	5.9	5.6	5.9	6.2	5.9	6.3	6.3	7.1	7.9	8.2	8.2	9.4	9.3	9.3	9.9	9.9	9.4	8.1	6.4	5.2	5.9	6.7	6.7	7.3
Springfield, Ill.....	7.6	8.0	7.3	7.1	6.9	7.0	6.0	6.9	8.0	9.5	10.3	11.0	11.7	11.8	11.7	11.9	12.3	12.0	10.5	8.4	6.2	7.0	7.7	7.6	9.0
Springfield, Mo.....	3.7	4.0	4.2	4.1	4.1	4.4	4.1	4.8	5.9	7.0	8.0	6.6	7.2	7.0	8.3	8.0	8.0	7.5	6.8	5.1	4.6	4.2	3.8	3.5	5.5
Tampa, Fla.....	9.1	9.1	9.7	9.5	10.1	9.4	9.2	9.0	9.1	9.9	10.4	10.0	9.2	10.1	10.4	10.5	10.6	10.5	10.4	10.5	10.4	10.4	10.4	10.4	10.6
Tatoosh Island, Wash.....	8.0	7.3	6.9	6.5	6.7	6.5	7.1	8.0	9.6	10.5	11.6	13.2	13.6	14.6	14.3	14.9	15.6	14.1	13.9	11.2	10.0	10.4	8.8	8.6	10.5
Titusville, Fla.....	6.9	6.8	6.2	6.4	6.6	6.9	6.5	7.0	7.8	8.1	9.1	9.7	10.8	10.7	10.6	10.9	10.5	9.9	7.7	6.6	6.5	6.2	6.4	6.9	8.0
Toledo, Ohio.....	6.8	5.9	5.6	4.7	4.4	4.7	5.0	4.3	4.3	4.0	4.4	5.4	6.7	8.3	10.9	10.9	10.5	9.9	11.4	12.4	12.1	13.2	10.6	8.5	7.3
Tucson, Ariz.....	9.8	9.8	9.4	9.0	9.0	8.7	8.3	8.4	9.1	10.8	12.3	14.0	15.5	15.9	16.9	17.1	17.6	17.4	17.4	18.3	16.9	14.6	11.8	10.8	12.8
Valentine, Nebr.....	5.2	5.1	5.2	4.7	4.6	4.6	4.5	4.8	5.5	5.7	5.9	6.3	7.2	7.4	7.3	7.2	7.2	6.8	6.2	5.3	4.0	4.5	5.0	5.1	5.7
Vicksburg, Miss.....	6.6	6.7	6.7	6.5	5.8	6.1	5.7	5.8	5.9	7.3	8.1	8.6	8.4	8.4	8.6	8.8	8.7	8.7	10.0	9.9	9.6	9.4	9.5	8.7	10.0
Vineyard Haven, Mass.....	6.6	6.7	6.7	6.5	5.8	6.1	5.7	5.8	5.9	7.3	8.1	8.6	8.4	8.4	8.6	8.8	8.7	8.7	10.0	9.9	9.6	9.4	9.5	8.7	10.0
Walla Walla, Wash.....	4.1	4.0	3.8	3.8	2.9	3.5	4.5	5.8	8.4	6.0	7.4	7.7	7.9	8.2	7.6	7.4	7.1	6.2	5.1	4.0	4.0	3.8	3.4	3.7	7.5
Washington, D. C.....	6.9	6.5	6.5	6.1	6.0	6.8	6.4	6.4	8.1	9.2	9.9	11.0	10.5	11.3	11.4	11.4	11.7	11.1	10.1	9.3					

TABLE VIII.—Prevailing and resultant winds from self-registers for June, 1894.

Number.	Station.	Prevailing wind.		Total movement.		Resultant direction.			Resultant movement.		Azimuth of movement minus direction.	Ratio of resultant movement to total movement.
		Direction from.	Duration.	Monthly.	Hourly average.	Direction from.	Duration.	Average hourly velocity.	Direction from.	Amount.		
	(1)	(2)	(3) Hours.	(4) Miles.	(5) Miles.	(6)	(7) Hours.	(8) Miles.	(9)	(10) Miles.	(11)	(12)
1	Eastport, Me.	sw.	283	5,029	7.0	s. 28 w.	320	8.0	s. 23 w.	2,555	— 5	0.508
2	Portland, Me.	s.	226	5,101	7.1	s. 8 w.	249	9.8	s. 2 w.	2,428	— 6	0.476
4	Boston, Mass.	sw.	271	7,594	10.5	s. 66 w.	318	12.5	s. 62 w.	3,966	— 4	0.422
5	Nantucket, Mass.	w.	246	7,511	10.4	s. 83 w.	438	10.2	s. 79 w.	4,482	— 4	0.597
8	New Haven, Conn.	sw.	260	5,093	7.1	s. 47 w.	352	7.2	s. 46 w.	2,522	— 1	0.495
10	Albany, N. Y.	s.	299	4,773	6.6	s. 22 w.	313	7.2	s. 16 w.	2,241	— 6	0.470
11	New York, N. Y.	sw.	232	6,223	8.6	s. 30 w.	319	9.4	s. 37 w.	2,988	+ 7	0.480
13	Philadelphia, Pa.	sw.	222	6,478	9.0	s. 68 w.	258	10.3	s. 68 w.	2,666	— 0	0.410
15	Baltimore, Md.	sw.	166	4,654	6.5	s. 72 w.	219	7.2	s. 77 w.	1,575	+ 5	0.338
16	Washington, D. C.	sw.	151	3,896	5.4	s. 64 w.	190	5.9	s. 69 w.	1,115	+ 5	0.286
17	Lynchburg, Va.	sw.	151	2,736	3.8	s. 61 w.	157	4.9	s. 75 w.	768	+ 14	0.281
18	Norfolk, Va.	sw.	248	6,724	9.3	s. 30 w.	270	11.8	s. 37 w.	3,189	+ 2	0.473
24	Wilmington, N. C.	sw.	345	5,987	8.3	s. 32 w.	411	8.7	s. 29 w.	3,562	+ 3	0.595
26	Augusta, Ga.	se.	165	3,340	4.6	s. 11 e.	238	4.6	s. 9 e.	1,093	+ 2	0.327
27	Savannah, Ga.	s.	296	5,136	7.1	s. 10 e.	398	6.8	s. 14 e.	2,695	— 4	0.525
28	Jacksonville, Fla.	se.	182	5,072	7.0	s. 53 e.	299	7.8	s. 54 e.	2,325	— 1	0.458
30	Key West, Fla.	e.	382	6,133	8.5	s. 73 e.	396	9.5	s. 76 e.	3,747	— 3	0.611
33	Atlanta, Ga.	sw.	130	5,599	7.7	s. 52 w.	96	10.0	s. 60 w.	959	+ 8	0.172
38	Vicksburg, Miss.	w.	167	4,079	5.7	s. 38 w.	88	7.2	s. 15 w.	631	+ 23	0.155
39	New Orleans, La.	ne.	141	4,084	5.7	s. 56 e.	185	5.1	s. 78 e.	944	— 22	0.231
42	Little Rock, Ark.	sw.	213	4,461	6.2	s. 27 w.	248	7.2	s. 26 w.	1,794	— 1	0.402
44	Galveston, Tex.	s.	228	7,750	10.8	s. 28 e.	519	10.8	s. 30 e.	5,568	— 2	0.721
48	Knoxville, Tenn.	sw.	205	3,250	4.5	n. 83 w.	106	7.5	s. 73 w.	793	+ 24	0.244
49	Memphis, Tenn.	w.	131	4,261	5.9	s. 27 w.	186	6.7	s. 29 w.	1,259	+ 2	0.295
50	Nashville, Tenn.	sw.	170	3,377	4.7	s. 32 w.	115	6.8	s. 51 w.	782	+ 19	0.232
52	Louisville, Ky.	s.	199	4,384	6.1	s. 9 w.	169	6.8	s. 26 w.	1,141	+ 17	0.260
53	Indianapolis, Ind.	sw.	133	3,410	4.7	s. 49 w.	200	5.1	s. 53 w.	1,014	+ 4	0.297
54	Cincinnati, Ohio.	se.	164	4,057	5.6	s. 13 w.	195	6.2	s. 54 w.	1,202	+ 41	0.296
55	Columbus, Ohio.	w.	134	5,221	7.3	s. 54 w.	138	11.7	s. 75 w.	1,613	+ 21	0.309
56	Pittsburg, Pa.	nw.	182	3,706	5.1	n. 72 w.	253	6.3	n. 81 w.	1,591	— 9	0.429
58	Buffalo, N. Y.	sw.	323	6,965	9.7	s. 62 w.	512	10.8	s. 66 w.	5,544	+ 4	0.796
60	Rochester, N. Y.	sw.	352	5,298	7.4	s. 58 w.	462	8.1	s. 62 w.	3,756	+ 4	0.709
62	Cleveland, Ohio.	se.	193	6,780	9.4	s. 31 w.	134	14.3	s. 31 w.	1,922	+ 0	0.283
64	Toledo, Ohio.	w.	248	5,750	8.0	s. 78 w.	241	10.1	s. 81 w.	2,444	+ 3	0.425
65	Detroit, Mich.	sw.	275	6,513	9.0	s. 60 w.	310	11.7	s. 66 w.	3,638	+ 6	0.559
66	Alpena, Mich.	se.	178	5,612	7.8	s. 53 w.	56	9.7	n. 62 w.	544	+ 65	0.097
67	Grand Haven, Mich.	sw.	258	5,582	7.8	s. 67 w.	338	8.4	s. 74 w.	2,851	+ 7	0.511
68	Marquette, Mich.	n.	172	5,637	7.6	n. 27 w.	170	8.8	n. 79 w.	1,491	+ 52	0.264
70	Sault Ste. Marie, Mich.	nw.	201	4,997	6.9	n. 78 w.	98	14.0	n. 63 w.	1,372	+ 15	0.275
71	Chicago, Ill.	sw.	162	10,654	14.8	s. 36 w.	196	14.4	s. 41 w.	2,826	+ 5	0.265
72	Milwaukee, Wis.	sw.	145	6,240	8.7	s. 14 w.	150	7.9	s. 35 w.	1,182	+ 21	0.189
74	Duluth, Minn.	e.	193	4,278	5.9	n. 33 e.	157	8.9	n. 19 w.	1,392	+ 52	0.325
75	Moorhead, Minn.	s.	205	8,796	12.2	s. 10 e.	206	17.9	s. 16 e.	3,686	— 8	0.418
77	Bismarck, N. Dak.	se.	182	7,388	10.3	s. 35 e.	158	11.4	s. 16 e.	1,799	+ 19	0.244
79	Saint Paul, Minn.	se.	304	5,111	7.1	s. 23 e.	326	7.3	s. 17 e.	2,370	+ 6	0.464
81	Davenport, Iowa.	sw.	244	5,513	7.7	s. 30 w.	269	7.3	s. 37 w.	1,966	+ 7	0.357
82	Des Moines, Iowa.	sw.	169	5,295	7.4	s. 32 w.	235	10.4	s. 29 w.	2,436	+ 3	0.460
88	Saint Louis, Mo.	s.	250	7,129	9.9	s. 15 w.	322	11.0	s. 20 w.	3,553	+ 5	0.498
90	Kansas City, Mo.	s.	249	5,962	8.3	s. 19 e.	307	9.9	s. 16 e.	3,044	+ 3	0.511
92	Omaha, Nebr.	se.	241	5,816	8.1	s. 16 e.	299	10.3	s. 20 e.	3,065	— 4	0.527
96	Huron, S. Dak.	se.	292	11,517	15.0	s. 34 e.	276	22.7	s. 31 e.	6,254	+ 3	0.543
98	Havre, Mont.	sw.	198	6,756	9.4	s. 74 w.	272	9.7	s. 71 w.	2,637	+ 3	0.390
100	Helena, Mont.	sw.	300	5,708	7.9	s. 74 w.	367	9.5	s. 66 w.	3,470	+ 8	0.608
106	Colorado Springs, Colo.	n.	214	7,417	10.3	s. 51 e.	48	31.7	s. 6 w.	1,522	+ 57	0.205
107	Denver, Colo.	s.	210	5,946	8.3	s. 17 w.	218	8.0	s. 5 w.	1,753	+ 12	0.295
108	Pikes Peak, Colo.	sw.	271	19,241	26.7	s. 52 w.	399	34.8	s. 56 w.	13,898	+ 4	0.722
111	Dodge City, Kans.	se.	294	10,582	15.1	s. 40 e.	431	17.5	s. 27 e.	7,614	+ 13	0.700
114	Abilene, Tex.	sw.	327	8,495	11.8	s. 4 w.	385	12.8	s. 5 w.	4,922	+ 1	0.580
116	El Paso, Tex.	w.	195	6,547	9.1	n. 76 w.	147	17.5	n. 74 w.	2,593	+ 2	0.396
117	Santa Fe, N. Mex.	sw.	251	6,451	9.0	e.	324	10.9	s. 5 w.	3,515	+ 95	0.545
119	Yuma, Ariz.	w.	173	5,158	7.2	s. 80 w.	275	9.9	s. 82 w.	2,733	+ 2	0.530
122	Salt Lake City, Utah.	se.	182	4,836	6.7	s. 45 e.	155	5.1	s. 4 w.	792	+ 49	0.164
125	Spokane, Wash.	sw.	226	5,474	7.6	s. 8 w.	265	11.4	s. 19 w.	3,261	+ 11	0.596
130	Seattle, Wash.	se.	290	4,243	5.9	s. 16 e.	176	8.8	s. 27 e.	1,545	+ 11	0.304
132	Portland, Oregon.	nw.	229	5,797	8.1	n. 75 w.	265	8.6	s. 89 w.	2,279	+ 16	0.393
133	Roseburg, Oregon.	nw.	181	2,749	3.8	n. 48 w.	258	5.2	n. 44 w.	1,351	+ 4	0.493
137	San Francisco, Cal.	sw.	150	10,218	14.2	s. 35 w.	594	15.4	s. 40 w.	9,138	+ 5	0.894
140	San Diego, Cal.	w.	325	4,002	5.6	s. 86 w.	464	6.6	s. 86 w.	3,042	+ 0	0.760

TABLE IX.—Resultant winds from observations at 8 a. m. and 8 p. m., daily, during June, 1894.

Number.	Station.	Component direction from—				Resultant.		Number.	Station.	Component direction from—				Resultant.	
		N.	S.	E.	W.	Direction from—	Duration.			N.	S.	E.	W.	Direction from—	Duration.
<i>New England.</i>															
1	Eastport, Me.	10	29	10	23	S. 34 W.	23	71	Chicago, Ill.	11	27	15	22	S. 24 W.	18
2	Portland, Me.	9	29	13	22	S. 24 W.	22	72	Milwaukee, Wis.	13	23	17	23	S. 31 W.	12
3	Northfield, Vt.	15	37	5	11	S. 15 W.	23	73	Green Bay, Wis.	12	36	7	12	S. 12 W.	24
4	Boston, Mass.	8	23	9	35	S. 60 W.	30	74	Duluth, Minn.	22	7	24	17	D. 25 E.	17
<i>North Dakota.</i>															
5	Nantucket, Mass.	10	17	6	39	S. 78 W.	34		Mourhead, Minn.	13	31	16	12	S. 13 E.	18
6	Woods Holl, Mass.	2	17	3	18	S. 45 W.	21	75	Saint Vincent, Minn.	16	28	17	14	S. 14 E.	12
7	Block Island, R. I.	7	26	5	40	S. 61 W.	40	76	Bismarck, N. Dak.	15	22	23	12	S. 58 E.	13
8	New Haven, Conn.	13	30	7	25	S. 47 W.	25	77	Williston, N. Dak.						
9	New London, Conn.	10	26	7	29	S. 54 W.	27	78	<i>Upper Mississippi Valley.</i>						
<i>Middle Atlantic States.</i>															
10	Albany, N. Y.	10	34	7	16	S. 21 W.	26	79	Saint Paul, Minn.	7	32	26	14	S. 26 E.	28
11	New York, N. Y.	9	30	12	25	S. 31 W.	25	80	La Crosse, Wis.	13	38	8	10	S. 5 W.	25
12	Harrisburg, Pa.	14	14	10	31	... W.	21	81	Davenport, Iowa	9	28	15	23	S. 23 W.	21
13	Philadelphia, Pa.	15	23	11	29	S. 66 W.	20	82	Des Moines, Iowa	11	30	8	18	S. 28 W.	22
14	Atlantic City, N. J.	12	30	5	27	S. 51 W.	28	83	Dubuque, Iowa						
15	Baltimore, Md.	14	24	10	25	S. 56 W.	18	84	Keokuk, Iowa	6	34	8	24	S. 30 W.	32
16	Washington, D. C.	16	25	12	24	S. 53 W.	15	85	Cairo, Ill.	13	33	10	18	S. 22 W.	22
17	Lynchburg, Va.	15	21	13	27	S. 67 W.	15	86	Springfield, Ill.	9	28	9	18	S. 25 W.	21
18	Norfolk, Va.	11	30	11	23	S. 32 W.	22	87	Hannibal, Mo.	9	29	12	23	S. 29 W.	23
<i>South Atlantic States.</i>															
19	Charlotte, N. C.	7	31	16	25	S. 21 W.	26	88	Saint Louis, Mo.	12	29	10	16	S. 19 W.	18
20	Hatteras, N. C.	8	34	7	25	S. 35 W.	32	89	<i>Missouri Valley.</i>						
21	Kittyhawk, N. C.	10	26	13	30	S. 47 W.	23	90	Columbia, Mo.	6	16	9	7	S. 11 E.	10
22	Raleigh, N. C.	14	34	6	17	S. 29 W.	23	91	Kansas City, Mo.	10	39	16	5	S. 21 E.	31
23	Southport, N. C.	10	28	8	34	S. 55 W.	32	92	Springfield, Mo.	5	38	19	12	S. 12 E.	34
24	Wilmington, N. C.	7	33	7	29	S. 40 W.	34	93	Omaha, Nebr.	8	35	16	13	S. 6 E.	27
25	Charleston, S. C.	6	38	11	19	S. 14 W.	33	94	Valentine, Nebr.	11	32	14	14	S.	21
26	Augusta, Ga.	10	30	18	13	S. 14 E.	21	95	Sioux City Iowa	13	36	9	9	S.	23
27	Savannah, Ga.	5	41	14	9	S. 6 E.	36	96	Pierre, S. Dak.						
28	Jacksonville, Fla.	12	26	27	10	S. 51 E.	22		Huron, S. Dak.	14	30	22	11	S. 34 E.	19
<i>Florida Peninsula.</i>															
29	Jupiter, Fla.	9	25	31	9	S. 54 E.	27	98	<i>Northern Slope.</i>						
30	Key West, Fla.	6	15	40	6	S. 75 E.	35	99	Havre, Mont.	16	18	9	30	S. 85 W.	21
31	Tampa, Fla.	16	12	33	8	D. 81 E.	25	100	Miles City, Mont.	22	13	15	23	D. 42 W.	12
32	Titusville, Fla.	10	22	28	9	S. 58 E.	22	101	Helena, Mont.	6	24	6	39	S. 61 W.	38
<i>Eastern Gulf States.</i>															
33	Atlanta, Ga.	19	17	16	24	N. 76 W.	8	102	Rapid City, S. Dak.	15	22	15	20	S. 36 W.	9
34	Pensacola, Fla.	11	27	15	23	S. 27 W.	18	103	Cheyenne, Wyo.	21	23	7	32	S. 82 W.	15
35	Mobile, Ala.	18	25	11	15	S. 30 W.	8	104	Lander, Wyo.	14	22	7	31	S. 72 W.	25
36	Montgomery, Ala.	18	16	19	21	N. 45 W.	3	105	North Platte, Nebr.	11	30	15	18	S. 9 W.	19
37	Meridian, Miss.	14	24	15	25	S. 45 W.	14	106	<i>Middle Slope.</i>						
38	Vicksburg, Miss.	10	16	20	22	S. 38 W.	6	107	Colorado Springs, Colo.	27	21	10	9	N. 9 E.	6
39	New Orleans, La.	13	26	23	13	S. 38 E.	16	108	Denver, Colo.	13	30	8	21	S. 38 W.	22
<i>Western Gulf States.</i>															
40	Shreveport, La.	8	31	25	7	S. 38 E.	29	109	Pikes Peak, Colo.	8	25	8	36	S. 59 W.	33
41	Fort Smith, Ark.	7	21	30	8	S. 58 E.	26	110	Pueblo, Colo.	18	18	15	25	S. 5 W.	10
42	Little Rock, Ark.	9	31	14	21	S. 18 W.	23	111	Concordia, Kans.	6	39	16	12	S. 5 W.	33
43	Corpus Christi, Tex.	4	38	41	2	S. 49 E.	52	112	Dodge City, Kans.	7	36	27	4	S. 38 E.	37
44	Galveston, Tex.	3	41	24	7	S. 24 E.	42	113	Wichita, Kans.	9	37	15	9	S. 30 E.	32
45	Palestine, Tex.	6	31	20	17	S. 7 E.	25	114	Oklahoma, Okla.	6	45	15	8	S. 10 E.	40
46	San Antonio, Tex.							115	<i>Southern Slope.</i>						
<i>Ohio Valley and Tennessee.</i>															
47	Chattanooga, Tenn.	16	22	11	22	S. 61 W.	12	116	Abilene, Tex.	4	34	16	24	S. 15 W.	31
48	Knoxville, Tenn.	17	18	16	23	S. 82 W.	7	117	Amarillo, Tex.	5	41	13	30	S. 5 E.	36
49	Memphis, Tenn.	8	25	15	24	S. 28 W.	19	118	El Paso, Tex.	15	11	15	32	N. 77 W.	18
50	Nashville, Tenn.	13	21	17	24	S. 41 W.	11	119	Santa Fe, N. Mex.	6	33	22	22	S.	27
51	Lexington, Ky.	10	31	15	22	S. 18 W.	22	120	Tucson, Ariz.	6	29	15	27	S. 28 W.	26
52	Louisville, Ky.	15	29	14	15	S. 4 W.	14	121	Yuma, Ariz.	13	18	12	32	S. 76 W.	21
53	Indianapolis, Ind.	15	26	14	22	S. 36 W.	14	122	<i>Middle Plateau.</i>						
54	Cincinnati, Ohio	12	26	22	21	S. 4 E.	14	123	Winnemucca, Nev.	11	25	13	24	S. 38 W.	18
55	Columbus, Ohio	12	25	16	20	S. 17 W.	14	124	Salt Lake City, Utah	19	25	16	13	S. 27 E.	7
56	Pittsburg, Pa.	24	17	9	24	N. 65 W.	17	125	<i>Northern Plateau.</i>						
57	Parkersburg, W. Va.	9	30	23	12	S. 28 E.	24	126	Baker City, Oreg.	32	13	7	29	N. 49 W.	29
<i>Lower Lake Region.</i>															
58	Buffalo, N. Y.	4	31	2	40	S. 54 W.	47	127	Idaho Falls, Idaho	14	34	8	16	S. 22 W.	22
59	Oswego, N. Y.	5	21	5	34	S. 61 W.	33	128	Spokane, Wash.	7	32	17	19	S. 5 W.	25
60	Rochester, N. Y.	5	28	5	37	S. 54 W.	39	129	Walla Walla, Wash.	6	40	5	18	S. 21 W.	36
61	Erie, Pa.	8	26	6	32	S. 55 W.	32	130	<i>North Pacific Coast Region.</i>						
62	Cleveland, Ohio	13	24	17	27	S. 20 W.	12	131	Fort Canby, Wash.	15	14	8	32	N. 88 W.	24
63	Sandusky, Ohio	11	16	18	26	S. 58 W.	9	132	Port Angeles, Wash.	5	15	9	36	S. 70 W.	29
64	Toledo, Ohio	9	14	14	34	S. 76 W.	21	133	Seattle, Wash.	10	24	21	15	S. 23 E.	15
65	Detroit, Mich.	8	26	11	33	S. 51 W.	28	134	Tatoosh Island, Wash.	4	27	13	30	S. 36 W.	29
<i>Upper Lake Region.</i>															
66	Alpena, Mich.	18	18	17	24	... W.	7	135	Portland, Oreg.	29	17	4	26	N. 61 W.	25
67	Grand Haven, Mich.	12	21	8	29	S. 67 W.	3	136	Roseburg, Oreg.	25	10	12	26	N. 43 W.	20
68	Marquette, Mich.	23	18	9	20	N. 66 W.	12	137	<i>Middle Pacific Coast Region.</i>						
69	Port Huron, Mich.	14	26	11	21	S. 40 W.	16	138	Eureka, Cal.	30	13	4	30	N. 57 W.	31
70	Sault Ste. Marie, Mich.	12	17	19	28	S. 61 W.	10	139	Red Bluff, Cal.	16	25	19	16	S. 18 E.	10
								140	Sacramento, Cal.	7	41	9	19	S. 16 W.	35
									San Francisco, Cal.	1	44	1	31	S. 35 W.	52
									<i>South Pacific Coast Region.</i>						
									Fresno, Cal.	37	5	3	38	N. 48 W.	47
									Los Angeles, Cal.	7	7	23	29	... W.	6
									San Diego, Cal.	12	14	5	39	S. 87 W.	34

STATE WEATHER SERVICES.

The following table summarizes the more prominent climatological features given in the reports for June by the directors of the respective State Weather Services:

State.	Temperature.				Monthly ranges.				Precipitation.				Director.		
	Maximum.	Date.	Station.	Minimum.	Date.	Station.	Least.	Station.	Mean departure.	Maximum.		Minimum.			
										Amount.	Station.	Amount.		Station.	
Alabama.....	0	30	Pine Apple.....	39	1	Valley Head.....	61	Newburg.....	0	Elba.....	6.28	Gadsden.....	0.18	Opelika.....	F. P. Chaffee.
Alaska.....	-0.6	102	30												Not yet organized.
Arizona.....	-3.0	112	30	31	7	Keams Canyon.....	68	San Carlos.....	44	Fort Bowie.....	0.42	Hobbrook.....	0.00	Bisbee.....	W. R. Burrows.
Arkansas.....	0.0	106	30	42	1	Keese Ferry.....	60	Hot Springs.....	18	Wimlow.....	2.86	Hamburg.....	0.00	Mount Nebo.....	F. H. Clarke.
California.....	-4.3	118	30	45	11	Boca.....	66	Orangevale.....	18	Point Lobos.....	0.36	La Porte.....	0.00	Anaheim.....	J. A. Barwick.
Colorado.....	-1.0	105	30	36	8	Climax.....	67	Delta.....	30	Stratze Creek.....	0.66	Table Rock.....	0.00	Arboles.....	F. H. Brandenburg.
Connecticut.....	-0.8	95	23	35	8	Norwalk.....	55	Voluntown.....	42	New Hartford.....	2.54	New Hartford.....	0.31	Hartford.....	J. Warren Smith.
Delaware.....	-0.4	102	24	44	15	Wilmington.....	65	Wilmington.....	46	Dover.....	1.12	Millboro.....	1.16	Seaford.....	C. P. Oronk.
District of Columbia.....	-3.8	101	30	56	*	Pensacola.....	41	Pensacola.....	18	Key West.....	0.33	Myers.....	0.87	Pensacola.....	See Maryland.
Florida.....	-0.2	104	30	39	1	Dalhousie.....	59	Dalhousie.....	38	Way Cross.....	1.85	Augusta.....	0.65	Gillsville.....	Park Morrill.
Georgia.....	-0.2	104	30	37	12	Idaho City.....	62	Garden Valley.....	44	Kootenai.....	4.65	Grangeville.....	0.19	Boise Barracks.....	J. H. Smith.
Iaaho.....	-4.2	103	30	33	7	Bloomington.....	72	Bloomington.....	44	Herrina Prairie.....	2.49	Clear Creek.....	0.46	Albion.....	John Craig.
Illinois.....	-1.4	105	12	33	7	Vincennes.....	68	Vincennes.....	46	New Albany.....	1.50	Cambridge City.....	0.69	Hammond.....	Prof. H. A. Huston.
Indiana.....	-1.7	100	30	29	6	Mason City.....	66	Carroll.....	40	Mount Pleasant.....	2.28	See City.....	0.57	Washington.....	See Oklahoma.
Iowa.....	-0.6	104	29	34	6	Hays City.....	74	Eureka Ranch.....	43	Greendale.....	1.44	Mount Hope.....	0.31	Neas City.....	J. G. Sage.
Kansas.....	-0.6	104	23	35	1	Bu Bank.....	61	Middlesboro.....	41	Fort Eads.....	1.60	Eubank.....	0.86	Blandville.....	T. B. Jennings.
Kentucky.....	-1.2	101	30	43	2	Natchitoches.....	64	Natchitoches.....	18	Fort Eads.....	1.83	Laake Charles.....	0.66	Bastrop.....	Frank Burke.
Louisiana.....	-1.6	94	17	29	6	French Camps.....	62	Columbus.....	37	Beausley.....	1.56	Grand Meadow.....	0.20	Gardiner.....	R. E. Keckam.
Maine.....	-0.6	104	25	32	7	Sunnyside.....	58	Benedict.....	41	Recg Res., D. C. f.....	1.56	Oakland.....	0.87	Solomons.....	J. Warren Smith.
Maryland.....	-1.3	98	17	29	6	Grayling.....	70	Berlin.....	47	Cheboyan.....	1.09	Alpena.....	0.20	Chestnut Hill.....	Dr. W. B. Clark.
Massachusetts.....	-2.3	101	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	E. A. Evans.
Michigan.....	-5.7	100	30	29	1	French Camps.....	62	Columbus.....	37	Fayette.....	1.88	Brookhaven.....	0.26	Mazepa.....	E. A. Beals.
Minnesota.....	-1.7	107	30	35	1	Neesho.....	69	Grovedale.....	32	Gorin.....	0.91	Boonville.....	1.12	St. Louis.....	R. J. Hyatt.
Missouri.....	-2.0	93	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	A. E. Hackett.
Montana.....	-1.7	112	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	J. M. Sheriff.
Nebraska.....	-5.2	92	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	G. A. Loveland.
Nevada.....	-1.7	107	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	Prof. C. W. Friend.
New Hampshire.....	-1.4	96	17	29	6	French Camps.....	62	Columbus.....	37	Fayette.....	1.88	Brookhaven.....	0.26	Mazepa.....	J. Warren Smith.
New Jersey.....	-1.2	102	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	E. W. McGann.
New Mexico.....	-1.2	107	24	30	8	South Kortright.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	H. B. Hervey.
New York.....	0.0	104	28	34	4	Weymouth.....	64	Lemert.....	78	Weymouth.....	0.69	Moorhead.....	1.07	Williamsport.....	Prof. E. A. Fuertes.
North Carolina.....	-5.2	103	22	29	6	Hillhouse.....	69	Bowling Green.....	41	Athens.....	1.33	Napoleon.....	0.45	Orangeville.....	Dr. H. B. Battle.
North Dakota.....	-1.2	102	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	B. H. Bronson.
Ohio.....	-1.2	102	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	L. N. Bonham.
Oklahoma.....	-2.8	96	2	30	10	Detroit.....	70	Burns.....	28	Madison.....	0.04	Sierra Blanca.....	0.30	Sierra Blanca.....	J. I. Widmeyer.
Oregon.....	-0.0	102	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	Hon. H. Hayes.
Pennsylvania.....	-0.0	102	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	W. P. Latham.
Rhode Island.....	0.0	94	17	29	6	French Camps.....	62	Columbus.....	37	Fayette.....	1.88	Brookhaven.....	0.26	Mazepa.....	J. Warren Smith.
South Carolina.....	0.0	105	13	41	2	Hollands Store.....	62	Spartanburg.....	37	Charleston.....	1.05	McConick.....	0.25	Kingstree.....	J. W. Bauer.
South Dakota.....	-5.2	112	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	S. W. Glenn.
Tennessee.....	-1.0	100	30	35	1	Frankfort.....	73	Springville.....	43	Rugby.....	0.70	Ridgely.....	0.30	Mukensie.....	J. B. Marbury.
Texas.....	-1.3	110	30	35	7	Fort Hancock.....	72	Fort Hancock.....	43	Beaville.....	0.01	Orange.....	0.30	Sierra Blanca.....	J. I. Bryan.
Utah.....	-1.3	106	13	45	9	Scottfield.....	78	Scottfield.....	45	Lake Station.....	4.00	Scottfield.....	0.60	St. George.....	G. N. Salsbury.
Vermont.....	-1.4	96	17	29	6	French Camps.....	62	Columbus.....	37	Fayette.....	1.88	Brookhaven.....	0.26	Mazepa.....	J. Warren Smith.
Virginia.....	-2.6	100	23	35	8	Hot Springs.....	68	Eden Center.....	45	Seauket.....	0.72	Bovina Center.....	0.86	New York.....	Dr. E. A. Fuertes.
Washington.....	-5.0	99	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	H. F. Alescott.
West Virginia.....	-5.0	99	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	H. W. Richardson.
Wisconsin.....	-5.0	99	30	30	12	Belleville.....	69	Belleville.....	46	Osceola.....	0.86	Virginia City.....	0.00	Sanee Agency.....	S. C. Emery.
Wyoming.....	-5.0	95	30	30	14	Camp Pilot Butte.....	56	Camp Pilot Butte.....	41	Lander.....	4.52	Fort McKinney.....	0.30	Lander.....	E. M. Ravenscroft.

† At other points in the State.

* Two or more days.